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Education:

PhD: The University of Tokyo

MS: Tsinghua University

BS: Tsinghua University

General Areas of Expertise:

hydrological modeling, land surface remote sensing, data assimilation

Short Bio:

Dr. Hui Lu received the B.Eng. and M.Eng. degrees from Tsinghua University, Beijing, China, in 2000 and 2003, respectively, and the Ph.D. degree from The University of Tokyo, Tokyo, Japan, in 2006. He then joined the department of civil engineering in the University of Tokyo, as a research associate. In 2010, he became an associate professor in the department of Earth System Science, Tsinghua University, and also a member of the Joint Center for Global Change Studies, Beijing. He has authored more than 100 papers in journals and conferences. His current research interests include development of hydrologic model and data assimilation system, passive microwave remote sensing of land surface parameters, and application of Earth observation data in water cycle and global change study.

Five Representative Publications:

1. Wei Wang, Hui Lu*, Ruby Luang, Hongyi Li, et al. Dam construction in Lancang-Mekong River Basin could mitigate future flood risk from warming-induced intensified rainfall, GRL, DOI: 10.1002/2017GL075037, 2017
2. Wang, W., H. Lu*, Dawen Yang, Khem Sothea, Yang Jiao, Bin Gao, Xueting Peng, Zhiguo Pang. : Modelling Hydrologic Processes in the Mekong River Basin Using a Distributed Model Driven by Satellite Precipitation and Rain Gauge Observations, PoLS One. DOI: 10.1371/journal.pone.0152229, 2016
3. Hui LU, Toshio KOIKE, Hideyuki FUJII, Tetsu OHTA and Katsunori TAMAGAWA: Development of a Physically-based Soil Moisture Retrieval Algorithm for Spaceborne Passive Microwave Radiometers and its Application to AMSR-E, Journal of The Remote Sensing Society of Japan, Vol. 29, No.1, 253-261, DOI:10.11440/rssj.29.253, 2009
4. Hui Lu*, Toshio Koike, Kun Yang, Zeyong Hu, Xiangde Xu, Mohamed Rasmy, David Kuria, Katsunori Tamagawa: Improving Land Surface Soil Moisture and Energy Fluxes Simulation over the Tibet Plateau by Assimilation of Microwave Remote Sensing Data and GCM Output into a Land Surface Model, International Journal of Applied Earth Observations and Geoinformation, vol.17, pp. 43-54, 2012
5. Kaighin A. McColl, Wei Wang, Bin Peng, Ruzbeh Akbar, Daniel Gianotti, Hui Lu*, Ming Pan, Dara Entekhabi, Global characterization of surface soil moisture drydowns, GRL, 44,3682-3690, DOI: 10.1002/2017GL072819, 2017

FEWSTERN Symposium 2017 Presentation Title and Abstract:

Simulation of future hydrologic processes by a distributed model and climate projections
Hui Lu

A distributed hydrologic model was developed to assess the impacts of climate change on hydrological processes in the Mekong Basin. Climate projection derived from ISI-MIP was used to drive the model. A simple reservoir operation rule was adopted to represent the effects of dam construction. Our results demonstrate that (1) climate change will bring more frequent and severe floods in future, and (2) dam construction could partly mitigate the future flood risk in this basin, especially in the upstream region where big dams located.